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Agenda Item 14

Attached is a paper entitled "CGIAR Policy on Plant Genetic Resources" (AGR/TAC:IAR/88/4 Rev.2).

This document is for the consideration of the Group at ICW 1988 under Agenda Item 14 - TAC recommendations on plant genetic resources.

Attachment

Distribution

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AGR/TAC:IAR/88/4 Rev.2

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

TECHNICAL ADVISORY COMMITTEE

CGIAR POLICY ON PLANT GENETIC RESOURCES

TAC SECRETARIAT

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

August 1988

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

TECHNICAL ADVISORY COMMITTEE

The Chairman

Davis, California
July 29, 1988

Dear Dr. Hopper,

I take pleasure in transmitting to you the document entitled "CGIAR Policy on Plant Genetic Resources".

This document was prepared by TAC after wide consultation, and approved in joint session with the Centre Directors at TAC 46 in Hyderabad. It sets out the responsibilities and commitments that the concerned Centres supported by the CGIAR have for all aspects of the use and conservation of genetic resources. It also covers such concerns as ownership, security and quarantine.

Means for implementing this policy have been formulated, and a joint TAC-Centre Directors working group has been established to guide the process. From time to time, I would be happy to report to the Group on progress achieved.

Sincerely,

Alex F. McCalla
TAC Chairman

Dr. W. David Hopper
Chairman, CGIAR
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CGIAR POLICY ON PLANT GENETIC RESOURCES

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Introduction

The growing interest in gene banks shown by national authorities throughout the world has been reflected in developments such as the inauguration of the FAO Commission on Plant Genetic Resources in 1985. Subsequently, in 1986, the CGIAR re-affirmed the high priority it has traditionally accorded to the conservation of plant genetic resources. The activities it has promoted and the policies that will guide its future support for this important area of work are summarized below.

Institutions

One CGIAR institution, the IBPGR, is dedicated entirely to activities related to plant genetic resources, while nine of its other institutions, namely, CIAT, CIMMYT, CIP, ICARDA, ICRISAT, IITA, ILCA, IRRI and WARDA (referred to as the "commodity Centres") also make major contributions to the work.

The IBPGR has a broad mandate to act in a catalytic way to stimulate work on plant genetic resources throughout the world. The commodity Centres devote their effort to the species identified in their formal mandates. Work on genetic resources supported by the CGIAR is dedicated primarily to crop plants, pastures, fruits and vegetables, together with their wild and weedy relatives. Currently, the CGIAR effort does not include animals, micro-organisms, ornamental plants, or trees used for timber, and does not directly extend to the preservation of species *in situ*.

Types of Gene Bank

Although the term "gene bank" is loosely applied to any collection of germplasm, three broad types of gene bank may be distinguished by reference to the collections maintained in them and the conditions under which they are stored.

> Base collections are stored under conditions that ensure long-term viability of material (up to 100 years) and are not normally used for routine distribution or interchange of accessions. Their purpose is security.
>
> Active collections are stored under conditions that ensure medium-term viability (about 30 years). Active collections are normally bigger than base collections both in the number of accessions and the amounts of seed. They usually contain material in the process of being evaluated and characterized as well as material represented in base collections. Ideally, all accessions in active collections should be maintained in sufficient quantity to be available on request.

Working collections are kept by plant breeders and other scientists under conditions that ensure sufficient longevity for the purposes of their own research. Much of the material in the working collections of the International Centres is made available, through active collections, to collaborative networks involving national programs. In general, however, working collections are not regarded necessarily as part of the coordinated international effort on plant genetic resources.

Purpose

The purpose of CGIAR support for work on plant genetic resources is to ensure that the diversity of germplasm is safely maintained and made available for use in programmes of research and crop improvement for the long-term benefit of all people. The CGIAR seeks to achieve this purpose both directly, through the institutions it supports, and indirectly, through strengthening national capabilities.

Activities

Activities supported by the CGIAR in connection with the conservation of plant genetic resources include exploration, collection, characterization, multiplication, evaluation, storage, data management, information services, and the supply of germplasm to plant breeders and other research workers. Where appropriate, these activities are supported by research and training.

Exploration and Collection: It is the policy of the CGIAR that, in all matters involving exploration and collection, its institutions should work in collaboration with the national authorities concerned, mounting joint expeditions whenever possible. Material and information are shared with the country in which they are collected.

In addition to exploration and collection promoted by the IBPGR, the commodity Centres have responsibility for ensuring the establishment and maintenance of collections of material relevant to the improvement of their mandated crops. They collaborate as an international network in promoting the exploration and collection necessary to fulfill this responsibility.

Characterization: The IBPGR takes a leading role in mobilizing expertise to compile standard descriptors for each major crop species and its wild relatives. This is achieved through appropriate international working groups and committees, which also help to encourage the use of standard nomenclature for a given species by all gene banks.

Multiplication and Evaluation: Multiplication and evaluation of material collected for gene banks can be done effectively only through the cooperation of plant breeders accustomed to dealing with the species in question. Consequently, contributions to these activities by the commodity Centres, as

well as by national agricultural research systems in both the developing and the industrialized countries, are crucial. It is the policy of the CGIAR to encourage its institutions to work collaboratively with national systems wherever possible in these two important activities.

Storage: In order to minimize the risk of germplasm deteriorating in storage, the CGIAR supports the development of international standards for the operation of gene banks. It also supports the adoption of these standards by its own institutions and encourages their adoption by gene banks throughout the world.

Data Management and Information Services: The CGIAR supports the development of computerized data bases for gene banks. It encourages the wide dissemination of information on genetic resources from all its institutions.

Supply of Germplasm: It is the policy of the CGIAR that Centres should supply from active collections the germplasm requested by any bona fide research worker anywhere in the world, provided adequate stocks are held at the time the request is received. Material in base collections is supplied only in emergencies to replace accessions inadvertently lost from active collections. The CGIAR encourages all countries to support the unrestricted interchange of germplasm throughout the world.

Ownership

The CGIAR regards the preservation of variability in plant germplasm as vital for research in subjects related to crop improvement. It is the CGIAR policy that collections assembled as a result of international collaboration should not become the property of any single nation, but should be held in trust for the use of present and future generations of research workers in all countries throughout the world.

Security

As an insurance against hazards, the CGIAR supports the principle of replication in the storage of germplasm. For base collections, the aim is to establish duplicate sets in different countries. For active collections, there are advantages in replicating subsets of them wherever it would be useful and cost-effective to do so. The CGIAR institutions work collaboratively with national systems in pursuing these aims.

Quarantine

The free interchange of germplasm among countries demands that strict standards of quarantine be constantly maintained. At the same time, efficiency in fulfilling quarantine requirements is essential for germplasm to be delivered quickly and without loss of viability. The

CGIAR recognizes the sovereignty of all nations in the implementation of quarantine regulations. Its institutions work collaboratively with national authorities in developing mechanisms that ensure adherence to the required standards while expediting the movement of germplasm.

Research

Because the conservation of genetic resources is a relatively new endeavour, many questions arise that cannot be answered on the basis of current knowledge. The CGIAR supports relevant research of high priority on genetic resources, both at its own institutions and through collaborative projects between them and appropriate institutions throughout the world.

Training

The CGIAR supports workshops and conferences on plant genetic resources, as well as the training of germplasm specialists, both at its own institutions and through courses sponsored by the IBPGR at other institutions.

Networks

The CGIAR encourages the development of international networks in all activities related to the conservation of plant genetic resources.

The Future

The elements of the policy outlined above have been compiled by TAC after wide consultation. After CGIAR approval, they will be used as the basis for continued support for work on plant genetic resources by the CGIAR and for the further development of collaboration with national agricultural research systems, the FAO Commission, and other organizations.